User Manual

# UM EN THERMOMARK X1.2

## Order No.: 2910774

Thermal transfer printer for labels and marker sleeves

PHOENIX CONTACT
INSPIRING INNOVATIONS

# User manual

# Thermal transfer printer for labels and marker sleeves

English

2014-02-24

Designation: UM EN THERMOMARK X1.2

Revision: c01

Order No.: -

This user manual is valid for:

| Designation | Version | Order No. |
|---|---|---|
| THERMOMARK X1.2 | | 5146231 |

# Please observe the following notes

### User group of this manual

The use of products described in this manual is oriented exclusively to qualified electricians or persons instructed by them, who are familiar with applicable standards and other regulations regarding electrical engineering and, in particular, the relevant safety concepts.

### Explanation of symbols used and signal words

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety measures that follow this symbol to avoid possible injury or death.

There are three different categories of personal injury that are indicated with a signal word.

**DANGER** This indicates a hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING** This indicates a hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION** This indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

This symbol together with the signal word **NOTE** and the accompanying text alert the reader to a situation which may cause damage or malfunction to the device, hardware/software, or surrounding property.

This symbol and the accompanying text provide the reader with additional information or refer to detailed sources of information.

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# 1 Safety and the environment

## 1.1 Description of the THERMOMARK X1.2

The THERMOMARK X1.2 is an industrial thermal transfer printer for printing continuous media (labels or marker sleeves).

With thermal transfer printing, heat from the print head causes the color layer of a transfer ribbon to be transferred to the print media.

The THERMOMARK X1.2 is equipped with all common interfaces in order to ensure problem-free connection to computers and networks. The printer can be connected to 100 V to 240 V AC mains networks without any type of adapter.

**Notes on print media**

The printing result essentially depends on a suitable combination of media and ink ribbon.

**NOTE: Use suitable print media**

A low-quality ink ribbon can lead to premature wear on the print head and result in a poor print image. Use only print media from Phoenix Contact. See "Ordering data" on page A-4.

## 1.2 Intended use

The THERMOMARK X1.2 is a state-of-the-art device which complies with recognized safety-related rules and regulations. Despite this, risk of injury or death could occur for users or third parties, and the THERMOMARK X1.2 or other property could be damaged while operating the device.

**WARNING: Danger to health due to incorrect usage**

The THERMOMARK X1.2 may only be used while in proper working order and only for the intended purpose. Users must act safely, be aware of potential dangers, and comply with the operating instructions. Faults, in particular those which affect safety, must be eliminated immediately.

**WARNING: Explosion hazard**

The THERMOMARK X1.2 must not be used in potentially explosive areas.

**NOTE: Damage to equipment due to the use of unsuitable media**

The THERMOMARK X1.2 is intended solely to print suitable media approved by the manufacturer. Any other or additional use is not intended. The manufacturer/supplier is not liable for damage resulting from misuse. Any misuse is at the risk of the user.

Intended use includes observing the operating instructions, including maintenance recommendations/instructions specified by the manufacturer.

## 1.3 Safety notes

**WARNING: Danger - mains voltage**

Do not open the housing of the THERMOMARK X1.2.

**WARNING: Notes on power supply connection**

Connect the THERMOMARK X1.2 only to an outlet with the correct voltage. The THERMOMARK X1.2 is designed for alternating voltage from 100 V to 240 V. (The electrical connection conditions must comply with the details on the rating plate.)

Before establishing or disconnecting connections, switch off all affected devices (computer, printer, accessories).

**WARNING: Risk of burns**

The print mechanism can become hot during printing. Do not touch during operation and let the printer cool down before changing materials or cleaning.

**WARNING: Danger to health due to incorrect usage**

Only carry out the actions described in these operating instructions. Other tasks may only be performed by trained personnel or service engineers.

Incorrect access to electronic components and their software can result in errors. In addition, any other incorrect operation or modifications to the device can endanger operational safety.

Various warning labels are attached to the device, which inform the user of hazards. Do not remove any warning labels, as otherwise users cannot be informed of the relevant hazards.

**WARNING: Danger of crushing from the cover**

Make sure you do not crush yourself with the cover.

**NOTE: Device faults due to moisture**

Only operate the THERMOMARK X1.2 in a dry environment and do not expose it to any moisture (spray, mist, etc.).

## 1.4 Notes on the print head

**NOTE: Print head wear**

The print head is the most sensitive part of your printer. If used incorrectly, the print head can be damaged very quickly.

Please observe the following notes:

**Clean NOTE: print head appropriately**

- Do not use sharp objects (knives, screwdrivers, etc.) to clean the print head.
- Clean the print head with a cotton bud that has been soaked with alcohol.
- The print head has a red protective glass layer at the top. Do not touch this protective layer with your hand.

**NOTE: Use the correct materials**

During printing, always make sure that there is no dirt on the media as this could be pulled underneath the print head, which could cause damage.

**NOTE: Open the print head if it is not to be used for a longer period of time**

If the THERMOMARK X1.2 is not used for several days, the print head must be opened. This increases the service life of the print head.

**NOTE: Use suitable ink ribbon**

The ink ribbon must be at least 5 mm wider than the media. Direct contact between the print head and the media can lead to increased wear on the print head.

## 1.5 Storing the printer

The following must be observed when storing the printer:

- Only store the THERMOMARK X1.2 in dry surroundings.
- Store the printer in such a way as to avoid damage.
- Store the printer together with all individual parts and accessories to avoid important parts becoming lost and being unavailable when it is used at a later date.

English

## 1.6 Help in the event of malfunctions

Please contact our customer service department immediately if any malfunctions should occur (hotline 0800/4 31 05 30). Never attempt to carry out repair work yourself.

Changes and/or modifications to the THERMOMARK X1.2 may only be carried out following written permission from Phoenix Contact.

## 1.7 Environmentally friendly disposal

**Dispose of used devices correctly**

Used devices contain valuable recyclable materials, which should be utilized.

Dispose of used devices separately from other waste, i.e., via an appropriate collection site.

The modular design of the THERMOMARK X1.2 means that it can easily be disassembled into its component parts in order for them to be taken for recycling.

The PCB of the THERMOMARK X1.2 is equipped with a lithium battery. Dispose of this battery in a collection container for old batteries at a store or with the public waste disposal authority.

# 2 Connection and printing

## 2.1 Unpacking the THERMOMARK X1.2

- Lift the THERMOMARK X1.2 out of the box.
- Check the THERMOMARK X1.2 for damage which may have occurred during transport.
- Check delivery for completeness.

**Scope of supply**

– THERMOMARK X1.2-PRINTER thermal transfer printer
– Mains cable (Europe and US)
– USB cable
– empty cardboard core (if necessary, ready-mounted on the ink ribbon take-up hub)
– CD-ROM with this manual and drivers
– CD-ROM with marking software

Retain the original packaging for subsequent transport.

## 2.2 Setting up the THERMOMARK X1.2

**Select installation location**

**NOTE: The device and the print media can be damaged by humidity and water.**

The THERMOMARK X1.2 may only be set up in a dry location protected from spray.

The following are not suitable:

– Damp or dusty locations
– Environments that are subject to increased heat, direct sunlight or low temperatures (operating range: 10 °C to 35 °C).

Place the THERMOMARK X1.2 on a level, stable surface. The room must be dry, free of frost, and well-ventilated.

**Removing the transportation safeguards**

**Removing the transportation safeguards**

- Set up the THERMOMARK X1.2 on a level surface.
- Open the cover of the THERMOMARK X1.2.
- Remove the foam transportation safeguards near the print heads.

## 2.3 Connecting the THERMOMARK X1.2

**Mains and computer connections**

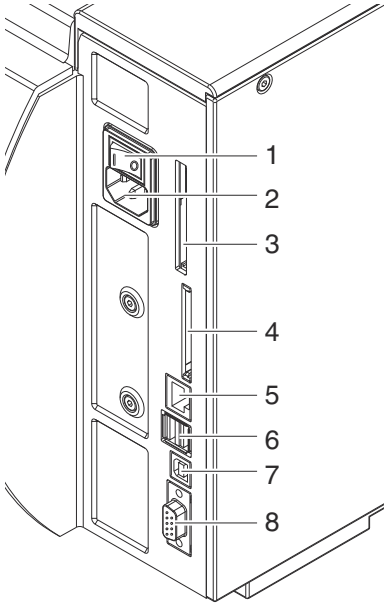



Figure 2-1 Mains and computer connections

**1** Mains switch
**2** Mains female connector
**3** Not supported (slot for Cardbus or Type II PC card)
**4** Not supported (slot for Compact Flash memory card)
**5** Ethernet 10/100 Base-T
**6** Not supported (USB interface for keyboard or scanner)
**7** USB high-speed slave interface
**8** V.24 (RS-232-C) serial interface

### 2.3.1 Connecting to the power supply

The THERMOMARK X1.2 is equipped with a wide-range power supply unit. The device can be operated with a mains voltage of 230 V AC/50 Hz or 100 V AC/60 Hz without any adjustments or modifications.

**NOTE: Device can be damaged by undefined inrush currents.**
Before connecting to the mains, set the mains switch (1) to "O".

- Insert the mains cable in the mains connection socket (2).
- Insert the mains cable connector into a grounded socket.

### 2.3.2 Connecting to a computer via USB

**NOTE: Errors during operation due to insufficient or missing grounding**
Make sure that all computers and connecting cables connected to the THERMOMARK X1.2 are grounded.

A printer driver must be installed if a USB interface is to be used for connection. You will find the appropriate printer driver for your device on the CD-ROM that was supplied with the printer or on the Internet at phoenixcontact.net/products.

- Switch on the computer.
- Exit all programs that are currently running.
- Switch on the THERMOMARK X1.2.
- Connect the computer and THERMOMARK X1.2 using the USB cable supplied.
- Insert the CD-ROM with driver software into the CD-ROM drive.
- The Windows Installation wizard is started automatically.
- Follow the on-screen instructions.
- If the "Has not passed Windows logo testing" error message appears during installation, continue with the installation anyway.

Following successful installation, an icon for the THERMOMARK X1.2 appears in the Windows "Printer" system folder.

**CLIP PROJECT advanced**

Next, set up the THERMOMARK X1.2 in the CLIP PROJECT advanced planning and marking software.

- Select the THERMOMARK X1.2 printer in CLIP PROJECT advanced under "File... Printer setup...".

### 2.3.3 Ethernet interface

See "Configuring the Ethernet interface" on page 3-5.

English

## 2.4 Loading Media and Printing

### 2.4.1 Notes on the print head

**NOTE: Use the correct materials**

During printing, always make sure that there is no dirt on the media as this could be pulled underneath the print head, which could cause damage.

**NOTE: Open the print head if it is not to be used for a longer period of time**

If the THERMOMARK X1.2 is not used for several days, the print head must be opened. This increases the service life of the print head.

**NOTE: Use suitable ink ribbon**

The ink ribbon must be at least 5 mm wider than the media. Direct contact between the print head and the media can lead to increased wear on the print head.

## 2.4.2 Loading the ink ribbon

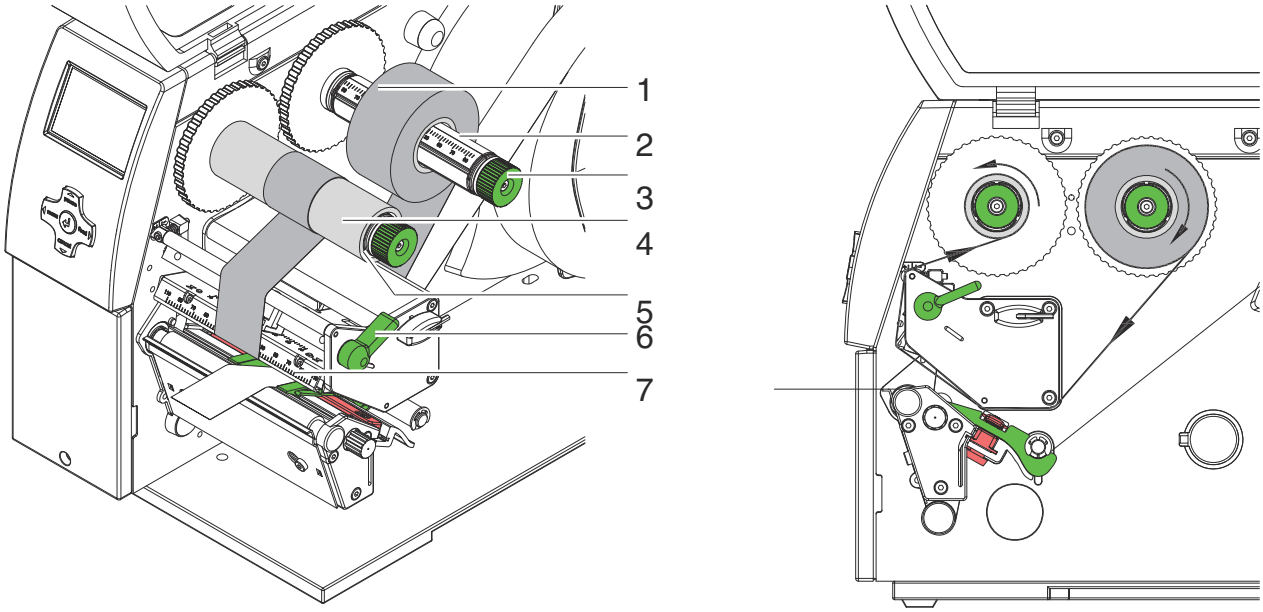



Figure 2-2 Feed path of the ink ribbon

**Loading the ink ribbon**

- Turn lever (1) counter clockwise to lift the print head.
- Slide the ink ribbon reel (3) onto the ribbon supply hub (4) so that the color coating of the ribbon faces downwards when being unwound.

  Centrally align the ink ribbon with the help of the printed scales.
- Hold the ink ribbon reel (3) and turn the knob on the ribbon supply hub (4) counter clockwise until the ink ribbon reel is secured.

If the "Out of ribbon" error message is displayed, this may mean that the ink ribbon reel or ink ribbon winder has not been correctly secured.

- Slide and secure an empty ink ribbon reel onto the ink ribbon winder (2).

Always retain the empty ink ribbon core.

- Guide ink ribbon through the print unit as shown in Figure 2-2.
- Secure the starting end of the ink ribbon to the ribbon take-up hub (2) with adhesive tape. Ensure counter clockwise direction of the ribbon take-up hub here.
- Tighten the ink ribbon path feed.
- Turn lever (1) clockwise to lock the print head.

## 2.4.3 Loading media

**Positioning labels or continuous media on the media hub**

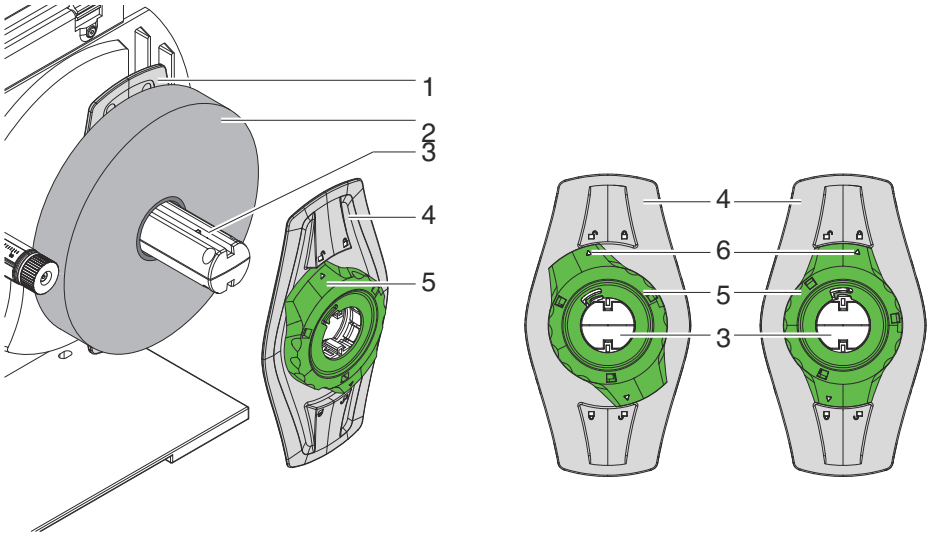



Figure 2-3 Inserting roll material

**Inserting roll material**

- Open the cover.
- Remove margin stop. To do this, turn the adjustable ring (5) counter clockwise so that the arrow (6) points to the symbol.
- Remove margin stop (4) from the media hub (3).
- Push material roll (2) onto the media hub so that the side to be printed is facing upwards.
- Place the margin stop (4) onto the media hub (3) and push until both margin stops (1, 4) are adjacent on the material roll and further pushing is resisted.
- Clip marginal stops to the media hub. To do this, turn the adjustable ring (5) clockwise so that the arrow (6) points to the symbol.

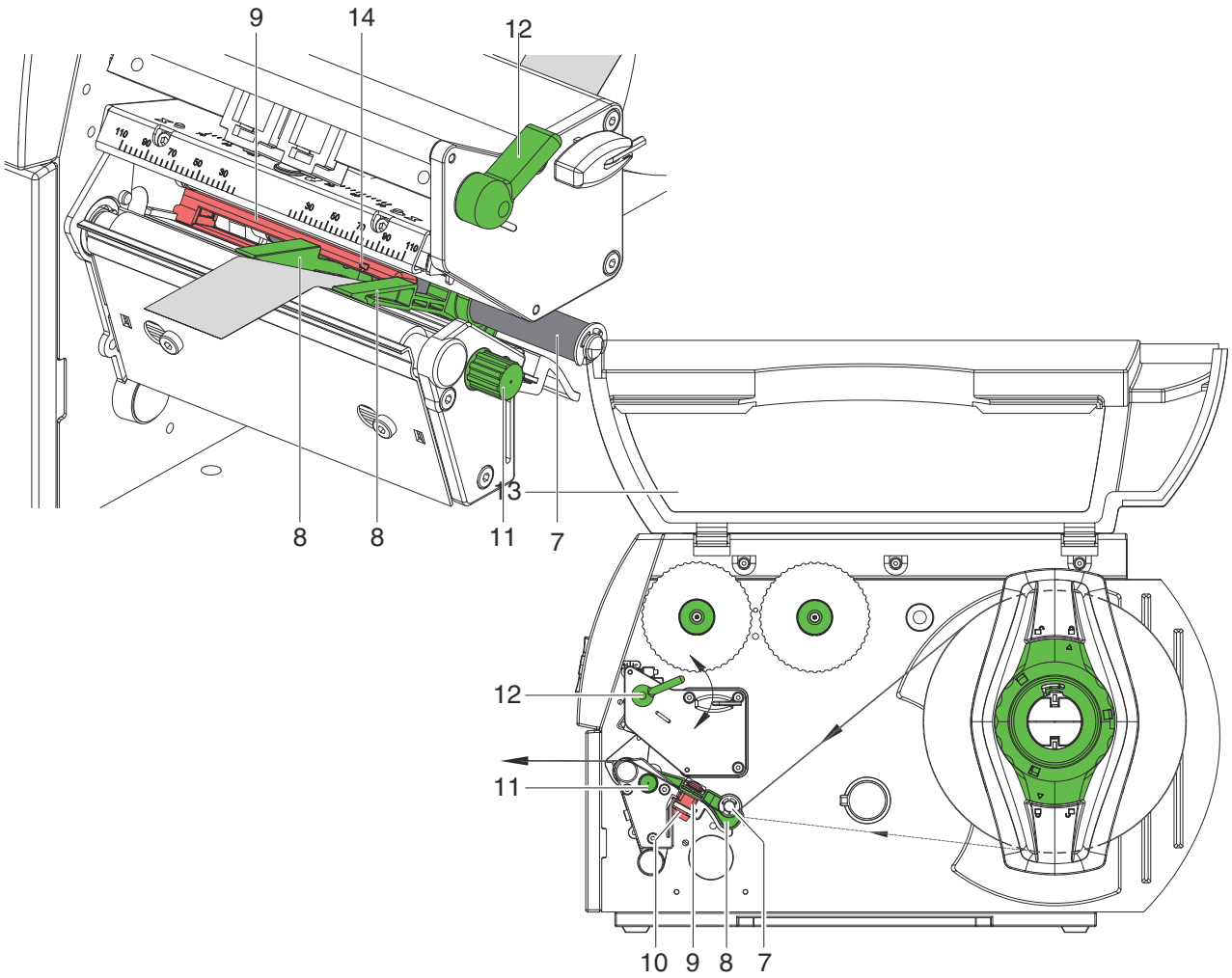



Figure 2-4 Inserting roll material

**Inserting material into the print head**

- Turn lever (12) counter clockwise to lift the print head.
- Turn the button (11), move the guides (8) apart so that the media can fit in between.
- Push the media under the deflection roller (7) and between the guides (8).
- Guide the strip so far through the label edge sensor (9) so that it exits the printing unit between the print head and print roller.
- Move the guides (8) close to the media edges. The media must be fed in exactly, in such a way that it does not jam.
- Close the print head.
- Normally the label sensor (10) can remain in the centered position (to the outer edge). If label recognition is to be carried by another position, remove the knurled screw and push the sensor into the appropriate position.
- The THERMOMARK X1.2 is now ready to print.

### 2.4.4 Printing

The THERMOMARK X1.2 is ready for operation when all connections have been established, media and ink ribbon are inserted and the print head is locked.

In the case of continuous media, pressing the **feed** button before starting a print job will result in an error message.

If the printer is still set for printing labels, it will look for the gap between the labels after the **feed** button is pressed and output an error message.

However, the printer is still set to continuous media after a print job has been started.

**Tear-off edge**

Once printed, the media strips are torn off by hand. The printer is equipped with a tear-off edge for this purpose.

A cutter (THERMOMARK X1-CUTTER, Order No. 5145290) is available as an accessory for automatic label cutting. This blade is also suitable for processing continuous label media.

A perforator and cutter (THERMOMARK W2-CUTTER/P, Order No. 5146244) is available for marker sleeves.

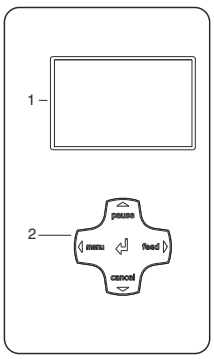
# 3 Description of the operating elements

The user can influence operation of the printer via the control panel:

– Pause, continue or cancel print jobs
– Set printer parameters, e. g. language and time (see page 3-3)
– Configure the Ethernet interface (see page 3-5)



## 3.1 Layout of the control panel




The button functions depend on the current printer status:

– active functions are indicated by the illuminated labels and symbols on the buttons of the navigator pad.
– During printing, active functions are illuminated in white (e.g. "**menu**" or "**feed**").
– In the offline menu, active functions are illuminated in orange (arrows, ↵ button).

**Function of buttons in the offline menu**

– Arrows: Move up, down, left or right in the menu tree
– ↵ button: Enter a parameter in the menu, call help information in the event of an error
– Press and hold down (> 2 s) the ↵ button in order to jump back to printing mode without applying new parameter settings.

**Button functions in printing mode**

Table 3-1 Button functions in printing mode

| Display | Button | | Function |
|---|---|---|---|
| "Ready" | **"menu"** | ON | Changes to the offline menu |
| "Ready" | **"feed"** | ON | Media feed |
| "Ready" | **"pause"** | ON | Pauses the print job |
| "Printing label" | | | |
| "Pause" | | | Continues print job |
| STOP | | Flashing | Continues print job |
| "Ready" | **"cancel"** | ON | Press briefly: Cancels current print job<br>Press and hold: Cancels current and deletes all other print jobs |
| "Printing Label" | | | |
| "Pause" | | | |
| STOP (page 3-2) | | | |
| STOP (page 3-2) | | Flashing | |
| STOP | ↵ | ON | Calls up help |

## 3.2 Indicators during printing

Table 3-2 Operating states

| | Cause/meaning |
|---|---|
| "Ready"<br>and configured symbol displays,<br>such as time and date . | The printer is in the Ready state and can receive data. |
| "Printing Label" | The printer is carrying out a print job.<br>Data transmission is possible for a new print job. |
| "Pause"<br>and the symbol | The print job has been temporarily interrupted by the operator. |
| <br>and error type<br>and the number of items to be printed<br>The "**pause**" button flashes,<br>the **"cancel"** and ↵ buttons light up | An error has occurred that can be corrected without canceling the print job.<br>You can continue the print job afterwards. |
| <br>and error type<br>and the number of items to be printed<br>The "**cancel"** button flashes and ↵ lights up | An error has occurred that cannot be corrected without canceling the print job. |
| <br>and the error type. | An error occurred during system startup.<br>• Switch the printer off and on again at the mains switch or<br>• Press the "**cancel"** button.<br>If the error continues to occur, inform Phoenix Contact |
| <br>Button illumination has been switched off. | If the printer is not used for some time, it switches to energy-saving mode automatically.<br>• Press any button to cancel. |

## 3.3 Modifying the language setting

The display language is set to English (UK) by default. To select a different language, proceed as follows:

- Press the "**menu**" button.
- Press the ▶ button until you access the "Setup" item.
- Press ▼ to confirm your selection.
- Press the ▶ button until you access the "Local Settings" item.
- Press ▼ to confirm your selection.
- Press the ▶ button until you access the "Country" item.
- Press ▼ to confirm your selection.
- Press the ▶ ◀ buttons to select the desired language.
- Press ↵ to confirm your selection.

Use the ▲ button to return to the higher menu level.

At the top menu level, press ◀ several times to switch from the offline menu to the "**Ready**" state.

## 3.4 Setting the date and time

**NOTE:** The offline menu contains several levels of setting options. The "Local settings" item can be used to set the language, date, and time.

**All other settings are set to optimum settings and must not be modified.**

- Press the "**menu**" button**.**
- Press the ▶ button until you access the "Settings" item.
- Press ▼ to confirm your selection.
- Press the ▶ button until you access the "Local settings" item.
- Press ▼ to confirm your selection.
- Press the ▶ button until you get to the desired item. Confirm selection by pressing ▼.
- Select the desired setting with the ▶ and ◀ keys.
- Press ↵ to confirm your selection.

Pressing and holding the ↵ button (> 2 s) switches from the offline menu to the **"Ready"** state.

Table 3-3 Parameters of the "Settings" > menu "local settings".

| Parameter | Meaning | Default |
|---|---|---|
| "Country" | Sets the display language and the country-specific time and date formats. | UK |
| "Timezone" | Adjusts the time display of the printer to the time zone in relation to UTC (Universal Time Coordinated). | UTC + 1 |
| "Daylight saving" | Selects the daylight saving regulation that is valid for the region. The time is then changed automatically. | EU |
| "Set date" | Sets the system date in the format DD.MM.YYYY (DD: day, MM: month, YYYY: year). The printout of the date is in the format set via the "Country" parameter. | – |
| "Set time" | Sets the system time in the format HH:MM:SS. When changing the time, ensure that the "Timezone", "Daylight saving" and "Set date" parameters are set correctly.<br>The time can also be synchronized automatically via the Internet using the Ethernet interface. The printout of the time is in the format set via the "Country" parameter. | – |

## 3.5 Configuring the Ethernet interface

**NOTE:** The offline menu contains several levels of setting options. The Ethernet interface can be configured under "Settings" > "Interfaces".

**All other settings are set to optimum settings and must not be modified.**

The integrated Ethernet interface allows operation of the printer in a network. Interface settings are made on the printer.

The following parameters are necessary for operation of the printer in a network. If necessary contact your network administrator.

– IP address
– Subnet mask
– or gateway

Alternatively, the Ethernet configuration can be obtained via a DHCP server. Make sure that the same configuration is always transferred.

**Setting the Ethernet interface on the printer**

- Press the "**menu**" button**.**
- Press the ▶ button until you access the "Settings" item.
- Press ▼ to confirm your selection.
- Press the ▶ button until you access the "Interfaces" item.
- Press ▼ to confirm your selection.
- Press the ▶ button until you reach the "Ethernet" item. Confirm the selection by pressing ▼.
- Select the desired setting with the ▶ and ◀ keys.
- Press ↵ to confirm your selection.
- Use the ▲ button to return to the higher menu level.
- At the top menu level, press ◀ several times to switch from the offline menu to the "**Ready**" state.

# 4 Maintenance and troubleshooting

## 4.1 Maintenance and cleaning

The print mechanism can become hot during printing. Do not touch them during operation and allow them to cool down before changing the media or before removal or adjustment.

### 4.1.1 Maintenance plan

Table 4-1 Maintenance plan

| When | Maintenance task | See |
|---|---|---|
| When the print image and media feed are adversely affected | Clean the print head | page 4-1 |
| | Clean the pressure roller | page 4-2 |
| | Replace the pressure rollers | page 4-2 |
| As necessary (if a cutter has been fitted) | Clean the cutter | page 5-2 |

### 4.1.2 Tools and cleaning agents

For adjustments and easy installation, use the **hexagonal wrench** provided, which is located in the bottom section of the print unit (see Figure 4-1 on page 4-2, item 2). No other tools are required for the work described here.

### 4.1.3 Cleaning the print head

Substances may accumulate on the print head during printing and adversely affect the print image, e.g. differences in contrast or vertical stripes.

**NOTE: Clean print head correctly**

– Do not use sharp objects (knives, screwdrivers, etc.) to clean the print head.
– The print head has a protective glass layer at the top. Do not touch this protective layer with your hand.

- Switch off the THERMOMARK X1.2.
- Make sure that the print mechanism has cooled down.
- Turn lever (1, Figure 2-2 on page 2-5) counter clockwise to lift the print head.
- Remove labels and ink ribbon from the printer.
- Clean the print head surface with a cotton swab dipped in pure alcohol.
- Allow print head to dry for 2 to 3 minutes before starting up the printer.

### 4.1.4 Cleaning the pressure roller

- Switch off the THERMOMARK X1.2.
- Make sure that the print mechanism has cooled down.
- Turn lever (item 1, Figure 4-1 on page 4-2) counter clockwise to lift the print head.
- Remove labels and ink ribbon from the printer.
- Remove deposits with the help of pure alcohol and a cloth.
- If the roller appears to be damaged, replace it.
- Push the hexagonal wrench (4) back into its holder.
- Reload the labels and ink ribbon (see "Loading Media and Printing" on page 2-4).

### 4.1.5 Replacing the pressure rollers

Poor quality printing may result if the pressure roller appears to be damaged or shows signs of wear. In this case, the pressure roller must be replaced.

If large amounts of sleeve material are to be processed, it may lead to denting in the pressure roller that will cause a poor quality printing on labels. The pressure roller often recovers after a few hours.

We recommend using separate pressure rollers for sleeves and labels.

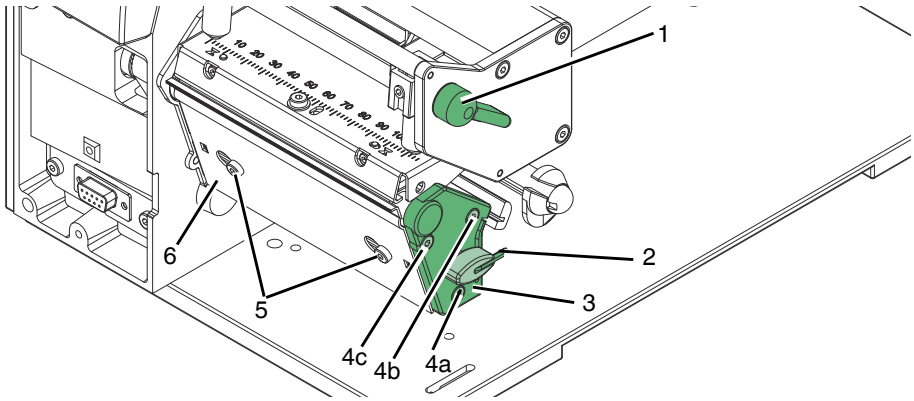



Figure 4-1 Removing the side plate

**Removing the side plate**

- Switch off the THERMOMARK X1.2
- Make sure that the print mechanism has cooled down.
- Remove the cutter by loosening the knurled screw and pulling the cutter toward you.
- Turn lever (1) counter clockwise to lift the print head.
- Remove labels and ink ribbon from the printer.
- Loosen the screws (5) and the plate (6) with the hexagonal wrench (2) provided and remove the plate (6).
- Remove the screws (4abc) on the side plate (3) with the hexagonal wrench.
- Remove side plate (3).

**Removing and fitting the pressure roller**

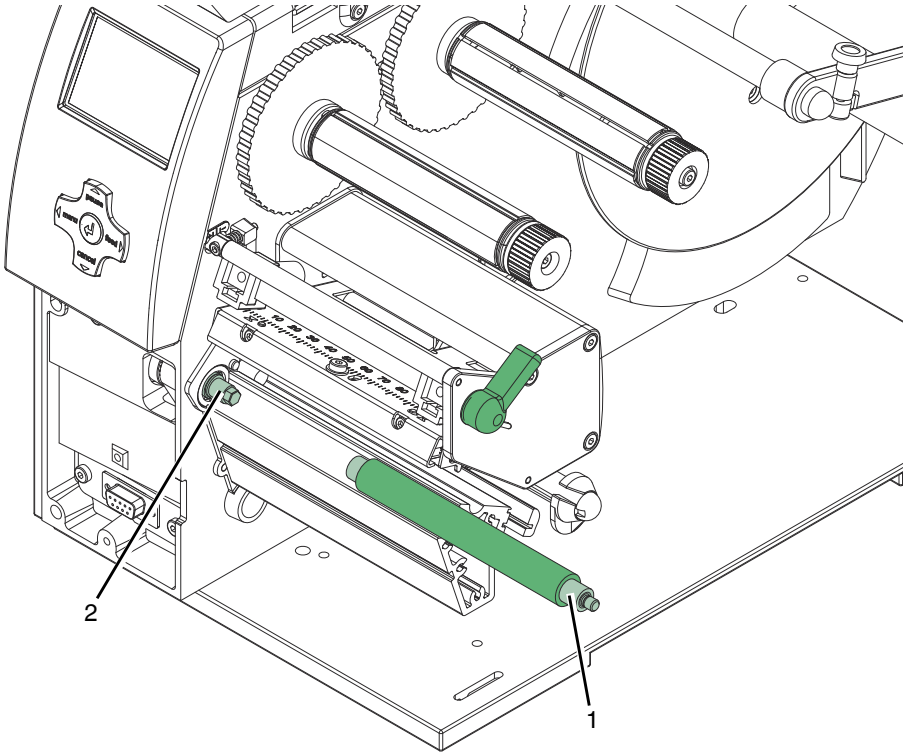



Figure 4-2 Removing and fitting the pressure roller

**Removing and fitting the pressure roller**

- Remove the pressure roller (1) from the shaft (2) in the housing.
- Place the new pressure roller ("Ordering data" on page A-4) onto the shaft and gently turn it until the hexagon flange of the shaft slots into the hexagonal socket-head of the pressure roller.
- Mount the side plate (pos. 3, Figure 4-1), secure with screws (item 4abc, Figure 4-1) and tighten in the following order: b–a–c.
- Mount the plate (item 6, Figure 4-1) and tighten the screws (item. 5, Figure 4-1) with the hexagonal wrench.

# 4.2 Troubleshooting

## 4.2.1 Solving problems

Table 4-2 Problem solving

| Problem | Cause | Remedy |
|---|---|---|
| Print image is blurred or missing in places | Print head is dirty | See "Cleaning the print head" on page 4-1. |
| | Pressure roller is dirty | See "Cleaning the pressure roller" on page 4-2. |
| | Pressure roller worn out/damaged | See "Replacing the pressure rollers" on page 4-2. |
| Printer advances the labels but does not print. | Ink ribbon not loaded correctly | Check feed path of the ink ribbon and orientation of the coated side and correct, if necessary. |

## 4.2.2 Error messages

Table 4-3 Error correction

| Error message | Cause | Remedy |
|---|---|---|
| "Out of ribbon" | Ink ribbon used up | Load new ink ribbon |
| | Ink ribbon melted through during printing | Cancel print job.<br>Clean print head (see page 4-1).<br>Replace ink ribbon (see page 2-5).<br>Restart print job. |
| | Ink ribbon supply roll is not secured to the ribbon supply hub | Secure ink ribbon reel (see page 2-5). |
| "No label" | There are labels missing on the media. | Press the "**pause**" button repeatedly until printer recognizes the next label on the media. |
| | The label size defined in the format sent to the printer does not match the actual media size. | Cancel print job.<br>Change label format in software.<br>Restart print job. |
| "Head open" | Print head not locked | Lock print head. |
| "Head too hot" | Print head excessively warm | The print job continues automatically after a pause. |
| "Out of paper" | Label roll/marker sleeves used up | Load media (see page 2-6) |
| | Error in media flow | Check media flow. |

# 5 Fitting and cleaning the cutter (accessory)

## 5.1 Fitting the cutter

There are two types of cutters available as accessories:

– A cutter for labels (THERMOMARK X1-CUTTER, Order No. 5145290)
– A perforator and cutter for marker sleeves (THERMOMARK W2-CUTTER/P, Order No. 5146244)

Both cutters are fitted in the same way.

**Notes on the cutter**

**WARNING:**

The cutter may only be fitted and removed when the printer is switched off.

The blades of the cutter are sharp. Risk of injury, especially when carrying out maintenance work.

Only operate the cutter when it is mounted on the printer.

Do not cut any media that is wider or thicker than indicated in the specification.

Do not reach into the area of the moving blades during operation.

**Mounting the cutter**

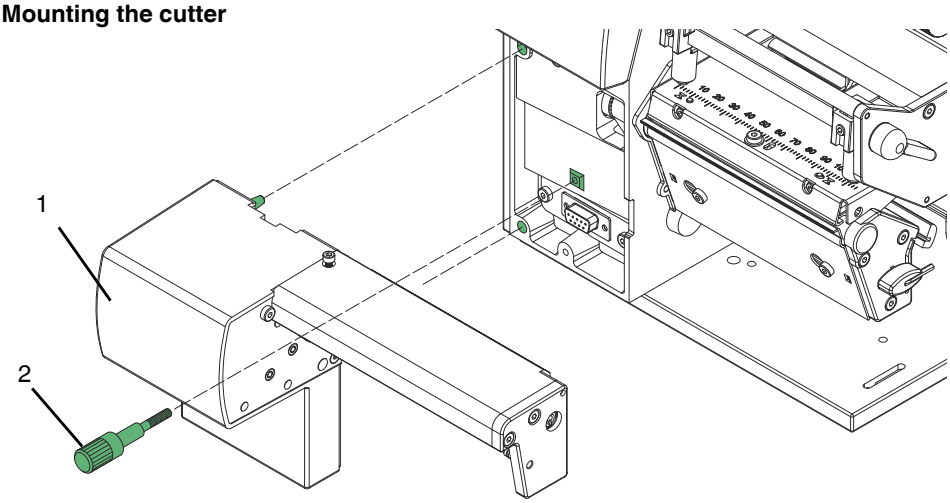



Figure 5-1 Mounting the cutter

**Fitting the cutter**

- Switch off the THERMOMARK X1.2.
- Insert the cutter (1) with the pins in the catch holes of the printer.
- Press the cutter against the printer. When you do this, the connector attached to the cutter makes contact with the I/O connection of the printer.
- Secure the cutter (1) with the screw (2).

You should **not** press the **feed** button directly after fitting the cutter since a large amount of material will be advanced. Start a print task directly afterward.

The printer will be configured to continuous material during the first print task.

- Select the appropriate setting in the marking software for printing with the cutting or perforation function.

## 5.2 Cleaning the cutter

During operation, dust particles accumulate, especially in the area of the blades. Remove these particles regularly with a soft brush or a vacuum cleaner.

Special maintenance work is necessary when you cut directly into the label material and not into the gap between labels. In such a case, adhesive residue accumulates on the blades. When working with backfeed in cutting mode, adhesive particles also accumulate on the pressure roller. For this reason, the pressure roller and the blades of the cutter should be cleaned at regular intervals (refer to "Cleaning the pressure roller" on page 4-2).

**WARNING: Risk of injury**
The blades of the cutter are sharp.

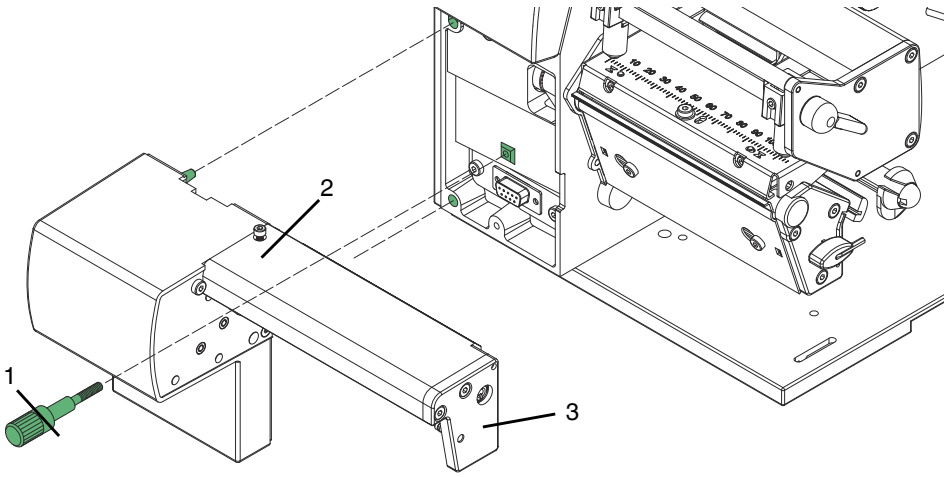



Figure 5-2 Cleaning the cutter

- Disconnect the THERMOMARK X1.2 from the mains.
- Loosen screw (1) and remove the cutter from the printer.
- You can use a Philips screwdriver (with a blade width of 7 mm) to turn the axle (3) and clean the circular blade.
- The circular blade's angle of rotation is restricted to 120° by the screw (2).
  **If there is a high level of soiling,** loosen the screw (2) so that it protrudes by approximately 5 mm in order to be able to turn the cutter without restriction.
- Remove any deposits on the blades with the help of isopropyl alcohol and a soft cloth.

**WARNING:** If you have loosened the screw (2), the circular blade must be re-adjusted after cleaning as described in section 5.2.1 on page 5-3.

### 5.2.1 Adjusting the cutter after cleaning

If the circular blade's screw was only removed in order to clean the blade, the circular blade (1) and the clock wheel (2) must be realigned with one another in order to ensure correct functioning of the cutter.

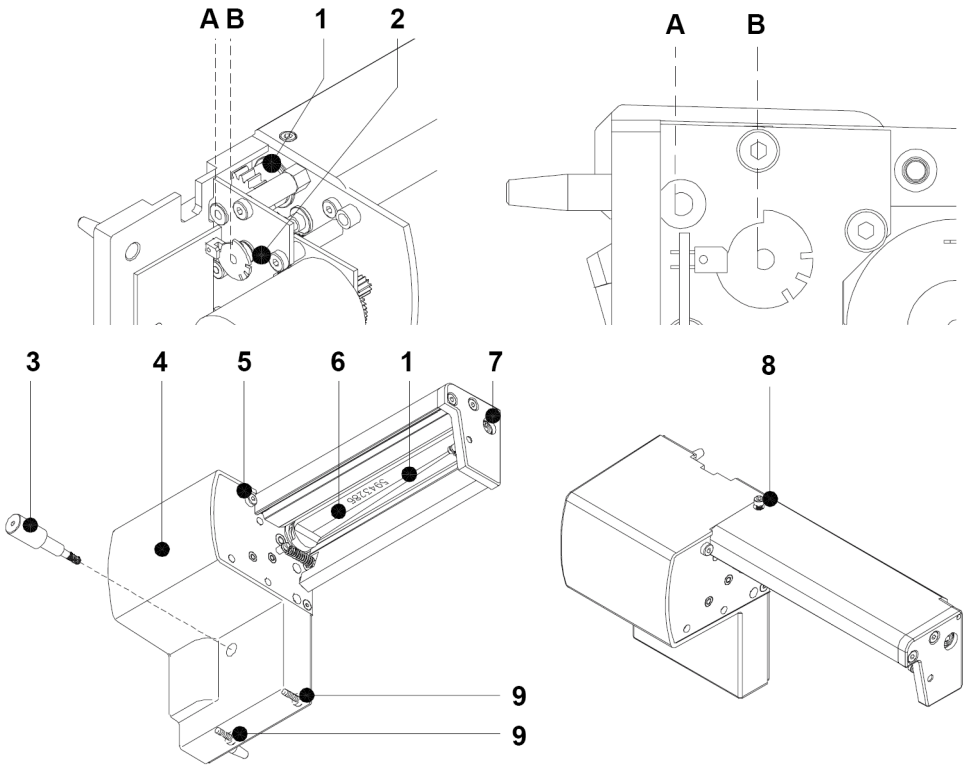



Figure 5-3 Aligning the circular blade with the clock wheel

- Completely remove screws (3), (5) and (9, on the rear of the cutter) and remove the enclosing guard (4).
- Loosen screw (8) so that it protrudes from the cutter's profile by approximately 5 mm.
- Use a Philips screwdriver (with a blade width of 7 mm) to turn the cutter's axle (7) so that the circular blade's label (6) faces down.
- When viewed as a cross-section, a flat surface can be seen on both axles (A, B). These two surfaces (A, B) are now aligned, or will be aligned after one or two more complete turns, and point toward the rear of the cutter.

Excessive tightening of screw (8) may damage its thread.

- Retighten screw (8) and the screw on the enclosing guard.

# A Technical appendix

## A 1 Technical data

| | |
|---|---|
| **Print head** | |
| Printing method | Thermal transfer |
| Print resolution | 300 dpi |
| Print speed | 30 mm/s ... 125 mm/s |
| Print width | Up to 105.6 mm |
| **Labels** | |
| Media | Labels on rolls or Leporello fold, assembled or continuous |
| Media thickness | 0.05 mm ... 1.2 mm |
| Media width | |
| for media thickness < 0.4 mm | 25 mm ... 105 mm |
| for media thickness > 0.4 mm | 5 mm ... 105 mm |
| Label width | 4 mm ... 116 mm |
| Label height | 5 mm ... 2000 mm |
| Weight | 60 g/m² ... 250 g/m² |
| Supply roll | |
| Outside diameter | up to 210 mm |
| Core diameter | 38 mm ... 100 mm |
| Label winding | Outside or inside |
| **Ink ribbon** | |
| Ink side | Outside |
| Reel diameter | up to 80 mm |
| Core diameter | 25 mm |
| Ribbon length | up to 500 m |
| Width | up to 114 mm |
| **Printer dimensions** | |
| Dimensions (W x H x D) | 242 mm x 274 mm x 446 mm |
| Weight | 9 kg |
| **Label sensor** | |
| Type | Gap sensor, bottom-reflective sensor |
| Distance to paper edge | 5 mm ... 53 mm |
| **Electronics** | |
| High-speed processor, 32 bits, ColdFire | |
| Clock rate | 266 MHz |

| Electronics | |
|---|---|
| Main memory (RAM) | 64 MB |
| Program memory (ROM) | 8 MB flash |
| Realtime clock with printout of time and date | |

| Control panel | |
|---|---|
| Buttons illuminated according to operating mode | **pause**, **feed**, **cancel**, **menu**, Enter, 4 x cursor |
| LCD graphic display | |
| Width x height | 60 mm x 40 mm |

| Interfaces | |
|---|---|
| Serial V.24 (RS-232-C) | 1200 to 230400 baud/8 bits |
| USB 2.0 | High-speed slave for PC connection |
| Ethernet | 10/100 Base-T, LPD, RawIP-Printing, DHCP, HTTP, FTP, SMTP, SNMP |

| Settings | |
|---|---|
| Local settings | Regional settings<br>(CZ, DE, DK, E, FR, GB/USA, H, I, IL, IR, N, NL, P, PL, RUS, S, SF, TR) |

| Monitoring | |
|---|---|
| Stop printing | When the end of the ink ribbon is reached, when end of media is reached, when print head is open |

| Test options | |
|---|---|
| System diagnostics | When switching on incl. Print head check, short status display, status printout, font list, device list, print head profile, label profile, test grid, monitor mode |
| Status messages | Comprehensive status printout with information about device settings, such as print length counter, operating hours counter, device status requested via software command |
| Status indicator in the display | Network error - no link, barcode error |

| Fonts | |
|---|---|
| Font types | 5 bitmap fonts including OCR-A, OCR-B, and 3 vector fonts Swiss 721, Swiss 721 Bold, and Monospace 821 available internally, loadable TrueType fonts |
| Character sets | Windows 1250 to 1257, DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869, EBC DIC 500, ISO 8859-1 through to -10 and -13 through to -16, WinOEM 720, UTF-8, Macintosh Roman, DEC MCS, K0I8-R.<br>All Western and Eastern European, Latin, Cyrillic, Greek, Hebrew, and Arabic characters are supported.<br>Optional Chinese (simplified Chinese) |
| Bitmap fonts | Size in width and height: 1 - 3 mm<br>Enlargement factor: 2 - 10<br>Orientation: 0°, 90°, 180°, 270° |

| Fonts | |
|---|---|
| Vector/size | In width and height: 0.9 - 128 mm<br>TrueType fonts: Variable enlargement factor<br>Orientation: 360° in increments of 1° |
| Font styles | Bold, italic, underlined, outlined, inverted, gray, vertical, depending on the font type |
| Character spacing | Variable |

| Software | |
|---|---|
| Windows drivers | Windows 2000, Windows XP 32/64bit, Windows 2003 32/64bit, Windows VISTA 32/64 bit |
| Planning and marking software | CLIP PROJECT advanced / professional |

| Operating data | |
|---|---|
| Voltage | 100 V AC ... 240 V AC, 50/60 Hz, PFC |
| Power consumption | 300 W, maximum |
| Operating temperature | 10 °C ... 35 °C |
| Humidity | 30 % ... 85%, without condensation |
| Safety requirements | CE, FCC class A, CB, CCC |

| Cutter THERMOMARK X1-CUTTER, Order No. 5145290 | |
|---|---|
| Cutting length | At least 5 mm |
| Material thickness | 0.05 mm ... 1.2 mm |
| Power supply | Via I/O connection on the printer |
| Outlet height | 2.5 mm |

| Perforator and cutter THERMOMARK W2-CUTTER/P, Order No. 5146244 | |
|---|---|
| Cutting length | At least 5 mm |
| Material thickness | 0.05 mm ... 1.2 m |
| Power supply | Via I/O connection on the printer |
| Outlet height | 4.5 mm |

# A 2 Ordering data

### Printer

| Description | Type | Order No. | Pcs./Pkt. |
|---|---|---|---|
| Thermal transfer printer for labels and marker sleeves, incl. connecting cable, Windows printer drivers and marking software | THERMOMARK X1.2 | 5145274 | 1 |

### Accessories

| Description | Type | Order No. | Pcs./Pkt. |
|---|---|---|---|
| Cutter for labels | THERMOMARK X1-CUTTER | 5145290 | 1 |

### Replacement parts

| Description | Type | Order No. | Pcs./Pkt. |
|---|---|---|---|
| Pressure roller | THERMOMARK X-ROLLER | On request | |
| Cutter | THERMOMARK X1-CUTTER | 5145290 | 1 |
| Perforator and cutter | THERMOMARK W2-CUTTER/P | 5146244 | 1 |

### Materials

| Description | Type | Order No. | Pcs./Pkt. |
|---|---|---|---|
| **Labels** for THERMOMARK X1.2, 2500 pieces per roll, lettering field size: 16.5 mm x 5 mm, color: White | EML (16.5x5)R | 0816702 | 1 |
| **Labels** for THERMOMARK X1.2, 2500 pieces per roll, lettering field size: 20 mm x 8 mm, color: White | EML (20x8)R | 0816786 | 1 |
| **Labels** for THERMOMARK X1.2, 1000 pieces per roll, lettering field size: 70 mm x 32 mm, color: White | EML (70x32)R | 0817060 | 1 |
| **Labels** for THERMOMARK X1.2, 300 pieces per roll, lettering field size: 100 mm x 73 mm, color: White | EML (100x73)R | 0817125 | 1 |
| **Labels** for THERMOMARK X1.2, 2500 pieces per roll, lettering field size: 17.5 mm x 8 mm, color: Yellow | EML (17.5x8)R YE | 0816757 | 1 |
| **Labels** for THERMOMARK X1.2, 2500 pieces per roll, lettering field size:20 mm x 8 mm, color: Yellow | EML (20x8)R YE | 0816799 | 1 |
| **Labels** for THERMOMARK X1.2, 1000 pieces per roll, lettering field size: 70 mm x 32 mm, color: Yellow | EML (70x32)R YE | 0817073 | 1 |
| **Labels** for THERMOMARK X1.2, 300 pieces per roll, lettering field size: 100 mm x 73 mm, color: Yellow | EML (100x73)R YE | 0817138 | 1 |
| **Labels** for THERMOMARK X1.2, 2500 pieces per roll, lettering field size: 26.5 mm x 17.5 mm, color: silver | EML (26.5x17.5)R SR | 0816883 | 1 |
| **Labels** for THERMOMARK X1.2, 1000 pieces per roll, lettering field size: 70 mm x 32 mm, color: silver | EML (70x32)R SR | 0817057 | 1 |
| **Labels** for THERMOMARK X1.2, 400 pieces per roll, lettering field size: 70 mm x 50 mm, color: silver | EML (70x50)R SR | 0817086 | 1 |
| **Labels** for THERMOMARK X1.2, 300 pieces per roll, lettering field size: 100 mm x 73 mm, color: silver | EML (100x73)R SR | 0817112 | 1 |
| **Ink ribbon** for printing labels with the THERMOMARK X1.2 length 300 m, width: 110 mm, black | THERMOMARK-RIBBON 110 | 5145384 | 1 |

### Materials

| Description | Type | Order No. | Pcs./Pkt. |
|---|---|---|---|
| **Shrink tube** for THERMOMARK X1.2 | | | |
| Conductor diameter: 1.0 mm ... 3.0 mm, length 30 m, white | WMS 3 (EX5)R | 0817633 | 1 |
| Conductor diameter: 1.0 mm ... 3.0 mm, length 30 m, yellow | WMS 3 (EX5)R YE | 0817662 | 1 |
| Conductor diameter: 1.5 mm ... 4.5 mm, length 30 m, white | WMS 4.5 (EX7.5)R | 0821904 | 1 |
| Conductor diameter: 1.5 mm ... 4.5 mm, length 30 m, yellow | WMS 4.5 (EX7.5)R YE | 0821946 | 1 |
| Conductor diameter: 2.0 mm ... 6.0 mm, length 25 m, white | WMS 6 (EX10)R | 0821917 | 1 |
| Conductor diameter: 2.0 mm ... 6.0 mm, length 25 m, yellow | WMS 6 (EX10)R YE | 0821959 | 1 |
| Conductor diameter: 3.0 mm ... 9.0 mm, length 20 m, white | WMS 9 (EX15)R | 0817646 | 1 |
| Conductor diameter: 3.0 mm ... 9.0 mm, length 20 m, yellow | WMS 9 (EX15)R YE | 0817675 | 1 |
| Conductor diameter: 4.0 mm ... 12.5 mm, length 20 m, white | WMS 12.5 (EX20)R | 0821920 | 1 |

## Materials

| Description | Type | Order No. | Pcs./Pkt. |
|---|---|---|---|
| Conductor diameter: 4.0 mm ... 12.5 mm, length 20 m, yellow | WMS 12.5 (EX20)R YE | 0821962 | 1 |
| Conductor diameter: 6.0 mm ... 18.0 mm, length 20 m, white | WMS 18 (EX30)R | 0817659 | 1 |
| Conductor diameter: 6.0 mm ... 18.0 mm, length 20 m, yellow | WMS 18 (EX30)R YE | 0817688 | 1 |
| Conductor diameter: 8.0 mm ... 25.0 mm, length 15 m, white | WMS 25 (EX40)R | 0821933 | 1 |
| Conductor diameter: 8.0 mm ... 25.0 mm, length 15 m, yellow | WMS 25 (EX40)R YE | 0821975 | 1 |
| **Ink ribbon** specifically for printing on marker sleeve with the THERMOMARK X1.2 | | | |
| Length 300 m, width: 64 mm, black | THERMOMARK-RIBBON 64-WMSE | 5145724 | 1 |
| Length 300 m, width: 64 mm, blue | THERMOMARK-RIBBON 64-WMSE BU | 5145737 | 1 |
| Length 300 m, width: 64 mm, red | THERMOMARK-RIBBON 64-WMSE RD | 5145740 | 1 |
| **Halogen-free shrink sleeve** for THERMOMARK X1.2 | | | |
| Conductor diameter: 1.0 mm ... 3.0 mm, length 30 m, white | WMSHF 3 (EX5)R | 0821988 | 1 |
| Conductor diameter: 1.0 mm ... 3.0 mm, length 30 m, yellow | WMSHF 3 (EX5)R YE | 0822068 | 1 |
| Conductor diameter: 1.5 mm ... 4.5 mm, length 30 m, white | WMSHF 4.5 (EX7.5)R | 0821991 | 1 |
| Conductor diameter: 1.5 mm ... 4.5 mm, length 30 m, yellow | WMSHF 4.5 (EX7.5)R YE | 0822071 | 1 |
| Conductor diameter: 2.0 mm ... 6.0 mm, length 25 m, white | WMSHF 6 (EX10)R | 0822000 | 1 |
| Conductor diameter: 2.0 mm ... 6.0 mm, length 25 m, yellow | WMSHF 6 (EX10)R YE | 0822084 | 1 |
| Conductor diameter: 3.0 mm ... 9.0 mm, length 20 m, white | WMSHF 9 (EX15)R | 0822026 | 1 |
| Conductor diameter: 3.0 mm ... 9.0 mm, length 20 m, yellow | WMSHF 9 (EX15)R YE | 0822107 | 1 |
| Conductor diameter: 4.0 mm ... 12.5 mm, length 20 m, white | WMSHF 12.5 (EX20)R | 0822039 | 1 |
| Conductor diameter: 4.0 mm ... 12.5 mm, length 20 m, yellow | WMSHF 12.5 (EX20)R YE | 0822110 | 1 |
| Conductor diameter: 6.0 mm ... 18.0 mm, length 20 m, white | WMSHF 18 (EX30)R | 0822042 | 1 |
| Conductor diameter: 6.0 mm ... 18.0 mm, length 20 m, yellow | WMSHF 18 (EX30)R YE | 0822123 | 1 |
| Conductor diameter: 8.0 mm ... 25.0 mm, length 15 m, white | WMSHF 25 (EX40)R | 0822055 | 1 |
| Conductor diameter: 8.0 mm ... 25.0 mm, length 15 m, yellow | WMSHF 25 (EX40)R YE | 0822136 | 1 |
| **Halogen-free ink ribbon** specifically for printing on halogen-free marker sleeves with the THERMOMARK X1.2 | | | |
| Length 300 m, width: 55 mm, black | THERMOMARK-RIBBON 55-WMSHF | 0827856 | 1 |

For numerous other print media, please refer to the Phoenix Contact catalog.

English

# A 3 Declaration of conformity

Gesellschaft für Computer-
und Automations-
Bausteine mbH & Co KG
Wilhelm-Schickard-Str. 14
D-76131 Karlsruhe,
Germany

## EU Declaration of Conformity

We declare herewith that as a result of the manner in which the device designated below was designed, the type of construction and the devices which, as a result have been brought on to the general market comply with the relevant fundamental regulations of the EU Rules for Safety and Health. In the event of any alteration which has not been approved by us being made to any device as designated below, this statement shall thereby be made invalid.

| | |
|---|---|
| Device: | **Transfer Printer / Thermal-direct Printer** |
| Type: | **THERMOMARK X1.2** |
| | |
| Applied EU Regulations and Norms: | |
| **Directive 2006/95/EC relating to electrical equipment designed for use within certain voltage limits** | • **EN 60950-1:2006** |
| | • **EN 61558-1:2005** |
| **Directive 2004/108/EC relating to electromagnetic compatibility** | • **EN 55022:2006** |
| | • **EN 55024:1998+A1:2001+A2:2003** |
| | • **EN 61000-3-2:2006** |
| | • **EN 61000-3-3:1995+A1:2001+A2:2005** |
| | |
| Signed for, and on behalf of the Manufacturer :<br><br>**cab Produkttechnik Sömmerda**<br>**Gesellschaft für Computer-**<br>**und Automationsbausteine mbH**<br>**99610 Sömmerda** | **Sömmerda, 26.10.09**<br><br>**Erwin Fascher**<br>**Managing Director** |

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